Testing average cycles for attraction strength 0.6  
Number of cycles run: 1575  
Number of cycles run: 2768  
Number of cycles run: 1762  
Number of cycles run: 3252  
Number of cycles run: 2362  
Number of cycles run: 1785  
Number of cycles run: 3510  
Number of cycles run: 1763  
Number of cycles run: 1859  
Number of cycles run: 1526  
Number of cycles run: 1451  
Number of cycles run: 3835  
Number of cycles run: 1005  
Number of cycles run: 2550  
Number of cycles run: 2880  
Number of cycles run: 965  
Number of cycles run: 2495  
Number of cycles run: 895  
Number of cycles run: 50000  
Number of cycles run: 1422  
Number of cycles run: 1685  
Number of cycles run: 1535  
Number of cycles run: 1144  
Number of cycles run: 37828  
Number of cycles run: 923  
Number of cycles run: 863  
Number of cycles run: 1269  
Number of cycles run: 1501  
Number of cycles run: 2834  
Number of cycles run: 1494  
Number of cycles run: 2069  
Number of cycles run: 2843  
Number of cycles run: 1226  
Number of cycles run: 50000  
Number of cycles run: 2188  
Number of cycles run: 1625  
Number of cycles run: 1524  
Number of cycles run: 1613  
Number of cycles run: 948  
Number of cycles run: 1625  
Number of cycles run: 5388  
Number of cycles run: 795  
Number of cycles run: 1344  
Number of cycles run: 2267  
Number of cycles run: 879  
Number of cycles run: 23849  
Number of cycles run: 791  
Number of cycles run: 885  
Number of cycles run: 9727  
Number of cycles run: 2259  
Av cycles for attraction strength 0.6 is 5091  
standard diviation is 11056.806559836012  
Testing average cycles for attraction strength 0.6  
Number of cycles run: 2689  
Number of cycles run: 6008  
Number of cycles run: 2179  
Number of cycles run: 3064  
Number of cycles run: 1944  
Number of cycles run: 2177  
Number of cycles run: 1842  
Number of cycles run: 1938  
Number of cycles run: 876  
Number of cycles run: 1160  
Number of cycles run: 2731  
Number of cycles run: 1244  
Number of cycles run: 883  
Number of cycles run: 4070  
Number of cycles run: 4520  
Number of cycles run: 50000  
Number of cycles run: 2715  
Number of cycles run: 3130  
Number of cycles run: 771  
Number of cycles run: 3074  
Number of cycles run: 1910  
Number of cycles run: 1113  
Number of cycles run: 2509  
Number of cycles run: 6709  
Number of cycles run: 8478  
Number of cycles run: 3628  
Number of cycles run: 2068  
Number of cycles run: 2176  
Number of cycles run: 3759  
Number of cycles run: 954  
Number of cycles run: 1651  
Number of cycles run: 1019  
Number of cycles run: 9907  
Number of cycles run: 1338  
Number of cycles run: 1133  
Number of cycles run: 2133  
Number of cycles run: 14873  
Number of cycles run: 4436  
Number of cycles run: 1164  
Number of cycles run: 1900  
Number of cycles run: 1900  
Number of cycles run: 2629  
Number of cycles run: 909  
Number of cycles run: 1544  
Number of cycles run: 12478  
Number of cycles run: 2528  
Number of cycles run: 17662  
Number of cycles run: 1787  
Number of cycles run: 2509  
Number of cycles run: 7140  
Av cycles for attraction strength 0.6 is 4419  
standard diviation is 7480.157118534288  
Testing average cycles for attraction strength 0.6  
Number of cycles run: 3955  
Number of cycles run: 970  
Number of cycles run: 2555  
Number of cycles run: 1379  
Number of cycles run: 755  
Number of cycles run: 3243  
Number of cycles run: 2149  
Number of cycles run: 6854  
Number of cycles run: 1335  
Number of cycles run: 1318  
Number of cycles run: 2106  
Number of cycles run: 7267  
Number of cycles run: 2482  
Number of cycles run: 860  
Number of cycles run: 830  
Number of cycles run: 3290  
Number of cycles run: 4205  
Number of cycles run: 7214  
Number of cycles run: 3843  
Number of cycles run: 7112  
Number of cycles run: 2512  
Number of cycles run: 2236  
Number of cycles run: 3112  
Number of cycles run: 1562  
Number of cycles run: 5241  
Number of cycles run: 1593  
Number of cycles run: 1239  
Number of cycles run: 5114  
Number of cycles run: 1709  
Number of cycles run: 2157  
Number of cycles run: 2140  
Number of cycles run: 2338  
Number of cycles run: 4239  
Number of cycles run: 4163  
Number of cycles run: 50000  
Number of cycles run: 2245  
Number of cycles run: 1779  
Number of cycles run: 5712  
Number of cycles run: 7528  
Number of cycles run: 820  
Number of cycles run: 804  
Number of cycles run: 874  
Number of cycles run: 2238  
Number of cycles run: 1209  
Number of cycles run: 2928  
Number of cycles run: 4557  
Number of cycles run: 3835  
Number of cycles run: 13591  
Number of cycles run: 33504  
Number of cycles run: 4941  
Av cycles for attraction strength 0.6 is 4792  
standard diviation is 8168.100242144087  
Testing average cycles for attraction strength 0.6  
Number of cycles run: 1500  
Number of cycles run: 2347  
Number of cycles run: 2037  
Number of cycles run: 2632  
Number of cycles run: 4174  
Number of cycles run: 2742  
Number of cycles run: 2161  
Number of cycles run: 1762  
Number of cycles run: 2822  
Number of cycles run: 2144  
Number of cycles run: 918  
Number of cycles run: 3753  
Number of cycles run: 48558  
Number of cycles run: 45818  
Number of cycles run: 1883  
Number of cycles run: 973  
Number of cycles run: 3281  
Number of cycles run: 2823  
Number of cycles run: 2883  
Number of cycles run: 1272  
Number of cycles run: 2326  
Number of cycles run: 779  
Number of cycles run: 3824  
Number of cycles run: 6970  
Number of cycles run: 3934  
Number of cycles run: 2443  
Number of cycles run: 4198  
Number of cycles run: 30499  
Number of cycles run: 4240  
Number of cycles run: 2316  
Number of cycles run: 857  
Number of cycles run: 1945  
Number of cycles run: 803  
Number of cycles run: 1319  
Number of cycles run: 1906  
Number of cycles run: 1644  
Number of cycles run: 3588  
Number of cycles run: 50000  
Number of cycles run: 1810  
Number of cycles run: 4126  
Number of cycles run: 852  
Number of cycles run: 4058  
Number of cycles run: 12345  
Number of cycles run: 821  
Number of cycles run: 5184  
Number of cycles run: 3278  
Number of cycles run: 826  
Number of cycles run: 1924  
Number of cycles run: 2929  
Number of cycles run: 2452  
Av cycles for attraction strength 0.6 is 6013  
standard diviation is 11602.513691560856  
Testing average cycles for attraction strength 0.6  
Number of cycles run: 1565  
Number of cycles run: 2710  
Number of cycles run: 30975  
Number of cycles run: 8689  
Number of cycles run: 2754  
Number of cycles run: 3128  
Number of cycles run: 4567  
Number of cycles run: 872  
Number of cycles run: 18143  
Number of cycles run: 2161  
Number of cycles run: 4379  
Number of cycles run: 16178  
Number of cycles run: 975  
Number of cycles run: 2816  
Number of cycles run: 1824  
Number of cycles run: 1234  
Number of cycles run: 1605  
Number of cycles run: 3176  
Number of cycles run: 4532  
Number of cycles run: 4692  
Number of cycles run: 9843  
Number of cycles run: 50000  
Number of cycles run: 3319  
Number of cycles run: 2777  
Number of cycles run: 2113  
Number of cycles run: 1364  
Number of cycles run: 8914  
Number of cycles run: 845  
Number of cycles run: 2239  
Number of cycles run: 2228  
Number of cycles run: 7553  
Number of cycles run: 3099  
Number of cycles run: 3872  
Number of cycles run: 15089  
Number of cycles run: 1890  
Number of cycles run: 1123  
Number of cycles run: 1578  
Number of cycles run: 2301  
Number of cycles run: 760  
Number of cycles run: 1670  
Number of cycles run: 2887  
Number of cycles run: 7029  
Number of cycles run: 5561  
Number of cycles run: 22749  
Number of cycles run: 2249  
Number of cycles run: 2210  
Number of cycles run: 2836  
Number of cycles run: 942  
Number of cycles run: 20897  
Number of cycles run: 15785  
Av cycles for attraction strength 0.6 is 6453  
standard diviation is 9072.330608492832  
Testing average cycles for attraction strength 0.6  
Number of cycles run: 1887  
Number of cycles run: 1848  
Number of cycles run: 1854  
Number of cycles run: 2129  
Number of cycles run: 879  
Number of cycles run: 1090  
Number of cycles run: 5357  
Number of cycles run: 1348  
Number of cycles run: 835  
Number of cycles run: 2796  
Number of cycles run: 42337  
Number of cycles run: 1184  
Number of cycles run: 30340  
Number of cycles run: 10302  
Number of cycles run: 2908  
Number of cycles run: 4906  
Number of cycles run: 2198  
Number of cycles run: 4522  
Number of cycles run: 3133  
Number of cycles run: 1946  
Number of cycles run: 2221  
Number of cycles run: 50000  
Number of cycles run: 2570  
Number of cycles run: 2688  
Number of cycles run: 4967  
Number of cycles run: 808  
Number of cycles run: 908

Number of cycles run: 906  
Number of cycles run: 4036  
Number of cycles run: 2338  
Number of cycles run: 1780  
Number of cycles run: 740  
Number of cycles run: 895  
Number of cycles run: 1363  
Number of cycles run: 7607  
Number of cycles run: 2509  
Number of cycles run: 3373  
Number of cycles run: 5215  
Number of cycles run: 39980  
Number of cycles run: 50000  
Number of cycles run: 3346  
Number of cycles run: 2079  
Number of cycles run: 812  
Number of cycles run: 1038  
Number of cycles run: 2297  
Number of cycles run: 952  
Number of cycles run: 2900  
Number of cycles run: 1133  
Number of cycles run: 48816  
Number of cycles run: 19190  
Av cycles for attraction strength 0.6 is 7825  
standard diviation is 13883.935064494577  
Testing average cycles for attraction strength 0.6  
Number of cycles run: 1480  
Number of cycles run: 1671  
Number of cycles run: 3636  
Number of cycles run: 950  
Number of cycles run: 2583  
Number of cycles run: 3605  
Number of cycles run: 2679  
Number of cycles run: 17620  
Number of cycles run: 1278  
Number of cycles run: 2971  
Number of cycles run: 13401  
Number of cycles run: 2658  
Number of cycles run: 3961  
Number of cycles run: 3933  
Number of cycles run: 50000  
Number of cycles run: 20148  
Number of cycles run: 2536  
Number of cycles run: 2114  
Number of cycles run: 925  
Number of cycles run: 3148  
Number of cycles run: 1475  
Number of cycles run: 726  
Number of cycles run: 23418  
Number of cycles run: 3534  
Number of cycles run: 2174  
Number of cycles run: 5676  
Number of cycles run: 913  
Number of cycles run: 34001  
Number of cycles run: 8547  
Number of cycles run: 1040  
Number of cycles run: 1575  
Number of cycles run: 3727  
Number of cycles run: 2974  
Number of cycles run: 1793  
Number of cycles run: 1600  
Number of cycles run: 2167  
Number of cycles run: 4056  
Number of cycles run: 1114  
Number of cycles run: 1296  
Number of cycles run: 1984  
Number of cycles run: 839  
Number of cycles run: 1868  
Number of cycles run: 1725  
Number of cycles run: 1618  
Number of cycles run: 2285  
Number of cycles run: 2610  
Number of cycles run: 20403  
Number of cycles run: 14965  
Number of cycles run: 948  
Number of cycles run: 1697  
Av cycles for attraction strength 0.6 is 5880  
standard diviation is 9410.635024334142  
Testing average cycles for attraction strength 0.6  
Number of cycles run: 2364  
Number of cycles run: 48419  
Number of cycles run: 6134  
Number of cycles run: 3779  
Number of cycles run: 1895  
Number of cycles run: 1853  
Number of cycles run: 4294  
Number of cycles run: 7230  
Number of cycles run: 1938  
Number of cycles run: 2834  
Number of cycles run: 1838  
Number of cycles run: 1412  
Number of cycles run: 1808  
Number of cycles run: 2951  
Number of cycles run: 5838  
Number of cycles run: 2983  
Number of cycles run: 901  
Number of cycles run: 1942  
Number of cycles run: 2581  
Number of cycles run: 1904  
Number of cycles run: 4707  
Number of cycles run: 5132  
Number of cycles run: 1601  
Number of cycles run: 912  
Number of cycles run: 929  
Number of cycles run: 853  
Number of cycles run: 938  
Number of cycles run: 2972  
Number of cycles run: 1895  
Number of cycles run: 1853  
Number of cycles run: 4704  
Number of cycles run: 1319  
Number of cycles run: 4597  
Number of cycles run: 2732  
Number of cycles run: 1160  
Number of cycles run: 1234  
Number of cycles run: 827  
Number of cycles run: 2335  
Number of cycles run: 2928  
Number of cycles run: 879  
Number of cycles run: 1626  
Number of cycles run: 2071  
Number of cycles run: 1091  
Number of cycles run: 2078  
Number of cycles run: 2316  
Number of cycles run: 2680  
Number of cycles run: 27711  
Number of cycles run: 2553  
Number of cycles run: 840  
Number of cycles run: 50000  
Av cycles for attraction strength 0.6 is 4847  
standard diviation is 9931.278625964062  
Testing average cycles for attraction strength 0.6  
Number of cycles run: 2981  
Number of cycles run: 50000  
Number of cycles run: 1966  
Number of cycles run: 1753  
Number of cycles run: 2839  
Number of cycles run: 3698  
Number of cycles run: 26414  
Number of cycles run: 1609  
Number of cycles run: 750  
Number of cycles run: 7803  
Number of cycles run: 2738  
Number of cycles run: 2159  
Number of cycles run: 2476  
Number of cycles run: 2918  
Number of cycles run: 893  
Number of cycles run: 752  
Number of cycles run: 1755  
Number of cycles run: 1396  
Number of cycles run: 1904  
Number of cycles run: 5450  
Number of cycles run: 3662  
Number of cycles run: 2659  
Number of cycles run: 2908  
Number of cycles run: 3811  
Number of cycles run: 928  
Number of cycles run: 3111  
Number of cycles run: 3178  
Number of cycles run: 1116  
Number of cycles run: 2104  
Number of cycles run: 10103  
Number of cycles run: 1386  
Number of cycles run: 2003  
Number of cycles run: 4557  
Number of cycles run: 1353  
Number of cycles run: 844  
Number of cycles run: 855  
Number of cycles run: 800  
Number of cycles run: 50000  
Number of cycles run: 3562  
Number of cycles run: 1628  
Number of cycles run: 3253  
Number of cycles run: 2546  
Number of cycles run: 894  
Number of cycles run: 3812  
Number of cycles run: 3298  
Number of cycles run: 1538  
Number of cycles run: 11514  
Number of cycles run: 45334  
Number of cycles run: 1725  
Number of cycles run: 6324  
Av cycles for attraction strength 0.6 is 6061  
standard diviation is 11537.919946588188  
Testing average cycles for attraction strength 0.6  
Number of cycles run: 2207  
Number of cycles run: 3299  
Number of cycles run: 3427  
Number of cycles run: 17343  
Number of cycles run: 964  
Number of cycles run: 790  
Number of cycles run: 1883  
Number of cycles run: 1709  
Number of cycles run: 10656  
Number of cycles run: 1072  
Number of cycles run: 1174  
Number of cycles run: 6905  
Number of cycles run: 1918  
Number of cycles run: 3188  
Number of cycles run: 1182  
Number of cycles run: 3237  
Number of cycles run: 1481  
Number of cycles run: 4161  
Number of cycles run: 1178  
Number of cycles run: 3574  
Number of cycles run: 2934  
Number of cycles run: 2015  
Number of cycles run: 2466  
Number of cycles run: 2314  
Number of cycles run: 953  
Number of cycles run: 11046  
Number of cycles run: 920  
Number of cycles run: 2027  
Number of cycles run: 3169  
Number of cycles run: 1142  
Number of cycles run: 1575  
Number of cycles run: 3759  
Number of cycles run: 1476  
Number of cycles run: 2690  
Number of cycles run: 2019  
Number of cycles run: 1477  
Number of cycles run: 6480  
Number of cycles run: 1507  
Number of cycles run: 886  
Number of cycles run: 1102  
Number of cycles run: 9942  
Number of cycles run: 1216  
Number of cycles run: 3300  
Number of cycles run: 1432  
Number of cycles run: 5452  
Number of cycles run: 2419  
Number of cycles run: 3927  
Number of cycles run: 1918  
Number of cycles run: 3505  
Number of cycles run: 16947  
Av cycles for attraction strength 0.6 is 3467  
standard diviation is 3691.2556671691227